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<u>Model</u>	<u>Working Width (meters)</u>	<u>Working Depth (cm)</u>	<u>Productivity (ha per hr)</u>	<u>Total Weight (kg)</u>	<u>Weight With Sweeps</u>	<u>Tractor With Which Used</u>
<u>Tractor-Mounted</u>						
KRN-2.8	2.7-2.8	4-15	1.0-1.3	350 300*	280	KhTZ-7, U-2
KON-2.8	2.8	6-14	0.8-1.35	350	280	U-2
KON-2.8P	2.8	6-16	0.8-1.2	--	--	U-2
KON-2.3	1.4 [2.3]	6.14	0.5-0.8	200	150	KhTZ-7

For the KON-2.3 cultivator, 1.4 meters' working width is used in cultivating potato crops having 70-centimeter row spacings; 2.3 meters is the maximum working width for cultivating open fields.

* [Additional weight of the NKU-2.8 and the KRN-2.8 apparently is the weight of the fertilizing device.]

The KUTS-4.2 Tractor-Drawn Cultivator

This cultivator was first produced in 1945. It was designed as a universal cultivator for fallow and row-crop cultivating. It has proved to be inadequate for work on fallow land and is now used for row-crop cultivating of crops having between-row spacings of 45, 60, 65, 70 and 90 centimeters. The cultivator is equipped with shovels, sweeps, and spring teeth. A hiller can be supplied if specially requested. The cultivator has no fertilizer. The KRM-4.2 cultivator and fertilizer is being tested as a replacement for the KUTS-4.2 cultivator.

The KUTS-2.8 Tractor-Drawn Cultivator

The KUTS-2.8 cultivator is similar in design to the KUTS-4.2 cultivator and is made in two models, A and B. Model A is used for cultivating sugar beet crops planted by the 2SK-16 twelve-row planter with 60-centimeter row spacings. The KRN-4.2 tractor-mounted six-row cultivator and fertilizer has been designed to replace the A model of the KUTS-2.8 cultivator.

The B model is used for cultivating potato crops having 70-centimeter row spacings. The KON-2.8 tractor-mounted cultivator and hiller will supplant the B model of the KUTS-2.8 cultivator.

The KPS-5.4 Tractor-Drawn Cultivator

The KPS-5.4 cultivator is used for cultivating sugar beet crops planted in 44.5-centimeter row spacings by the 2SK-16 planter. The cultivator is used with the U-2 tractor. The design of the KPS-5.4 cultivator, in general, is similar to designs of the KUTS-4.2 and the KUTS-2.8 cultivators.

The KN-4.2 Mounted Cultivator

The KN-4.2 cultivator is intended for cotton crops, but has been used for cultivating other row crops. The cultivator is mounted on the U-1 or the U-3

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tractor. Absence of fertilizer equipment is one of the drawbacks of the KN-4.2 cultivator. The KRN-4.2 cultivator and fertilizer has been designed to replace the KN-4.2 cultivator.

The KN-5.4 Mounted Cultivator

The KN-5.4 cultivator is designed for mounting on the U-2 tractor for cultivating sugar beet and other vegetable crops planted by the 2SK-16 planter.

The basic design of the KN-5.4 cultivator has been used in designing a new cultivator and fertilizer to be used with KDP-35 and MTZ-2 tractors.

The KDM Mounted Cultivator

The KDM cultivator is used with the U-1 tractor for cultivating cotton crops planted by the SSK four-row planter. The production of the KDM cultivator was stopped in 1953. The NKU-2.8 cultivator and fertilizer has supplanted the KDM cultivator.

The NKU-2.8 Cultivator and Fertilizer

The NKU-2.8 cultivator is designed to replace the KDM cultivator. Basic design of the NKU-2.8 cultivator is similar to the design of the KN-4.2 cultivator.

The KRN-2.8 Mounted Cultivator and Fertilizer

The KRN-2.8 cultivator is designed for use with the KhtZ-7 tractor for cultivating and fertilizing vegetable and other short stalk crops planted by the SON-2.8 planter or a four-row planter with 45, 60, 70, 90, and 20+50 centimeter spacings. Working tools of the KRN-2.8 cultivator are similar to the working tools of the KN-5.4 cultivator. The KRN-2.8 cultivator is equipped with the AT-2 manure spreading device.

The KON-2.8 Mounted Cultivator and Hiller

The KON-2.8 cultivator is designed for cultivating and hilling potato crops. It is used with the U-2 tractor.

A fertilizing attachment for the KON-2.8 cultivator was tested in 1952. The new model with the fertilizing attachment will be known as the KON-2.8P cultivator.

The KON-2.3 Cultivator and Hiller

The KON-2.3 cultivator is designed for use with the KhtZ-7 tractor for cultivating and hilling potato crops.

* * *

Despite the obvious advantages of tractor-mounted cultivators as compared to trailer-type cultivators, production of trailer-type cultivators is greater than that of tractor-mounted cultivators. Moreover, designing and testing of the KRN-4.2, a new trailer-type cultivator and fertilizer, are being rushed.

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It would be expedient to replace all trailer-type row-crop cultivators with the tractor-mounted models and to stop producing trailer-type cultivators as having no further value.

In order to equip all row-crop cultivators with fertilizers, the production of AT-2 fertilizers should be organized by the constant-flow method.

The NKU-2.8 cultivator and fertilizer, production of which has begun in 1953, is designed for use with the U-1 tractor having a mechanical hoist. Other cultivators are designed for use with hydraulic hoists.

Mechanization of basic row-crop farming has developed standard working widths of planters and cultivators. The growing of some crops has not been systematically mechanized, and any available machines are used. Thus, in Central Asia the planting of irrigated sugar beets is done by the TS-ZSh six-row planter with 70-centimeter row spacings, the 2SK16 four-row and eight-row planter with 60-centimeter row spacings, and the SSK cotton planter with 70-centimeter row spacings. In the Central Chernozem Region and the Ukraine, millet is sown with the 2SK16 planter, the T8-2 grain drill, and the SD-24 eight- and nine-row grain drill.

Applications of Tractor-Mounted Row-Crop Cultivators and Fertilizers

<u>Model</u>	<u>Type of Operations Performed</u>	<u>Basic Crops</u>	<u>Planting Machine</u>	<u>Tractor Models on Which Cultivators Are Mounted</u>
KRN-5.4	Between-row cultivating, thinning, fertilizing	Sugar beets	2SK-16	U-2, VTZ-24, MTZ-2, KDP-35
KRN-2.8	Between-row cultivating, thinning, fertilizing	Vegetables, feed roots	SON-28, SRN-4	KhTZ-7, U-2, VTZ-24
KRN-4.2	Between-row cultivating, thinning, hilling, fertilizing, furrowing	Grain, oil crops, irrigated sugar beets, vegetables	SSh-6, SSN-6, SRM-6	U-1, VTZ-24A, MTZ-1
KRN-2.8A	Between-row cultivating, hilling, fertilizing	Potatoes, cabbages	SKG-4,	U-2, VTZ-24
KRN-2.8B	Between-row cultivating, thinning, furrowing, fertilizing	Cotton	SSK	U-1, VTZ-24B

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